# NEW EFFORTS TO IMPLEMENT PBMS

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**Biographical Sketch**
Jerry Parr has a B.S. in Chemistry from the University of Texas and over 30 years of experience in environmental chemistry including sampling, sample preparation, analysis, data evaluation, and regulatory affairs. Mr. Parr's current efforts involve providing information services to laboratory professionals on CD-ROM. He serves as a Board member on a number of organizations that are involved in improving laboratory data quality and in 2002 was reappointed to an EPA Federal Advisory Committee, the Environmental Laboratory Advisory Board.

**Abstract**
About a decade ago a new approach to environmental monitoring, which is now called a Performance Based Measurement System (PBMS), began to be discussed. Under PBMS, laboratories would have more flexibility to modify methods to meet measurement objectives. However, PBMS is much more than flexibility in methods. PBMS has profound implications into how regulators specify regulatory requirements, how compliance with regulations is demonstrated, and how laboratories are accredited.

PBMS will become part of the operating framework for laboratories in the near future. Most importantly, the new requirements established under the PBMS framework will apply to all measurements including the use of existing EPA methods.

On October 31, 2000, the Environmental Laboratory Advisory Board (ELAB), a Federal Advisory Committee, presented a proposed implementation model for PBMS to members of the National Environmental Laboratory Accreditation Conference (NELAC). This proposal was accepted by the Conference and a subcommittee of the NELAC Quality Systems Committee then initiated efforts to incorporate this PBMS implementation model into the NELAC standards. This subcommittee included representatives from EPA, laboratories, state agencies, and regulated entities.

Suggested changes to the NELAC standards have been developed. All measurements made under NELAC, including those performed under the PBMS framework, must have an adequate demonstration that the measurement system provided data consistent with its intended use. The laboratory is to ensure the quality of results provided to clients by implementing a system to document the quality of the laboratory's analytical results. This demonstration and documentation will consist of three parts, 1) an initial determination that method has adequate accuracy, sensitivity and selectivity to meet study-specific client/regulatory requirements; 2) demonstration that the instrument is properly calibrated and that the measurement system is "in control"; and 3) documentation of the actual quality of the laboratory generated data.